Supreme Court, U. S.
FILED
DEC 20 1976
MICHAEL RODAK, JR., CLERK

In the Supreme Court of the United States

OCTOBER TERM, 1976

NO. 76-837

BRADCO OIL & GAS COMPANY,
Petitioner

versus

YOUNGSTOWN SHEET & TUBE COMPANY,
Respondents

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

JOSEPH L. WAITZ
WAITZ & DOWNER
Post Office Box 7015
Houma, Louisiana 70360

Attorneys for Petitioner

Of Counsel:

RAY MUIRHEAD
1414 Southwest Tower
Houston, Texas 77002

FRED COLLINS
323 Shell Building
Houston, Texas 77002

A B Letter Service, Inc., 327 Chartres St., New Orleans, La. (504) 581-5555

INDEX

	PAGE NO.
Opinions Below	1
Jurisdiction	2
Questions Presented	2
Statement of the Case	3
Argument	6
Certificate of Service	18
Appendix A	A-1
Appendix B	B-1
Appendix C	C-1
Appendix D	D-1
Appendix E	E-1

LIST OF AUTHORITIES

	PAGE NO.
Fields v. Volkswagon of America, Inc., et al., Pacific 2d Oklahoma No. 46805, July 27, 1976	12
Ford Motor Co. v. Matthews, 291 So. 2d 169 (Miss. 1974), 45 Miss. Law Review 1287 (1974)	13
Hastings v. Distran Products, Inc., 389 F. Supp. 1352 (Western Dist. La. 1975)	12,13,14
Houston-New Orleans, Inc. v. Paige Engineering Co., 353 F. Supp. 890 (Eastern Dist. of La. 1970)	9
Loyocano v. Continental Ins. Co., 283 So. 2d 302 (La. App. 4th Cir. 1973)	15
Noel, Defective Products: Abnormal Use, Contributory Negligence and Assumption of Risks, 25 Vanderbilt Law Review, 93, 1972	13
Perez v. Ford Motor Co., 497 F.2d 82 (1974)	6
Reyes v. Wyeth Laboratories, 498 F.2d 1264 (5th Cir. App. 1974)	10
Thibodeaux v. McWayne Castiron Pipe Co., 381 F.2d 491 (5th Cir. App. 1967)	10,16
Weber v. Fidelity & Casualty Ins. Co. of New York, 250 So. 2d 754 (1971)	6,9,15,16
Welch v. Outboard Marine Corp., 481 F.2d 252 (5th Cir. App. 1973)	7
West v. Hydro Test, Inc., 196 So.2d 598	10

IN THE SUPREME COURT OF THE UNITED STATES

NO.

BRADCO OIL & GAS COMPANY,
Petitioner

versus

YOUNGSTOWN SHEET & TUBE COMPANY,
Respondents

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FIFTH CIRCUIT

Bradco Oil & Gas Company respectfully prays that a Writ of Certiorari issue to review the judgment and opinion of the United States Court of Appeals for the Fifth Circuit entered in this proceeding on June 1, 1976, and the denial of the Petition for rehearing entered on September 22, 1976.

OPINIONS BELOW

The opinion of the United States District Court for the Eastern District of Louisiana is unreported. The opinion of the Court of Appeals for the Fifth Circuit is set out at 532 F.2d 501. This opinion is set forth in the appendix hereto as is the order denying the petition for rehearing which is unreported and as are the findings of fact of the trial court.

The judgment of the Court of Appeals for the Fifth Circuit was entered on June 1, 1976, and the order denying the petition for rehearing was entered on September 22, 1976, and this Petition for a Writ of Certiorari was filed within ninety days of that date.

JURISDICTION

The jurisdiction of this court is invoked under 28 U.S.C. Section 1254(1).

QUESTIONS PRESENTED

1) Whether or not the courts below erred as a matter of law in holding that the Youngstown Sheet & Tube Company had not manufactured a section of P-105 steel tubing defective for normal use where the pipe was used in a gas well in accordance with the accepted industry practice and rule in South Louisiana that hydrogen sulphide,if not detected by odor at the well site, is not considered a problem and no further analysis need be made and where the pipe, nevertheless, failed as a result of hydrogen sulphide embrittlement though no hydrogen sulphide had been detected by odor at the well site, all in conflict with Louisiana state jurisprudence on strict products liability holding that failure in normal use is the test for product defectiveness.

2) Whether or not the courts below erred in holding that the Youngstown Sheet & Tube Company had no duty to warn the purchaser that its product, P-105 steel tubing, could be dangerous when used in wells containing even trace quantities of hydrogen sulphide in spite of the court's accepted finding of fact that it was an accepted rule of the South Louisiana oil industry that if hydrogen sulphide cannot be detected by odor, no hydrogen sulphide analysis is made because it is not considered a problem and the courts' further finding that hydrogen sulphide was never detected by odor at the well site, all in conflict with Louisiana state jurisprudence on strict products liability.

3) Whether or not the courts below erred in finding the

defendant's product not defective in normal use in holding that the defendant owed no duty to warn of the product's limitations with respect to its use in the presence of trace quantities of hydrogen sulphide not detectable by the accepted industry test where there was no finding of *abnormal misuse* and where the plaintiff relied on accepted industry practices.

4) Whether or not the courts below erred in effectively holding that consumers may not use products in accordance with accepted industry practices.

5) Whether or not the courts below erred in effectively holding that a consumer is instead required to go further and conduct testing procedures not called for by industry practices and relative to dangers he would not normally expect.

6) Whether or not the courts below erred in recognizing classes of consumers to whom different standards are to be applied in terms of strict products liability where Louisiana law recognizes no such distinction.

7) Whether or not the courts below erred in applying prestrict liability Louisiana jurisprudence on negligence in its analysis of this strict liability case instead of applying the more recent strict liability Louisiana cases.

STATEMENT OF THE CASE

Bradco purchased tubing to be used in the drilling of an oil and gas well from Youngstown Sheet & Tube and Hydril. The tubing was shipped to the well site on January 6, 1969.[1] The well was completed in January of 1969 and determined

1. Exhibit D-5.

to be a producer and was shut-in from January 12, 1969, pending a gas pipeline connection until May 6, 1969, when testing began.[2] While being flowed on May 16, 1969, the Youngstown tubing broke.[3] As a result of the breaking of the tubing, the well could not be salvaged and was thus plugged and abandoned on July 18, 1969.[4] The loss of the well was caused by the breaking or parting of Youngstown tubing at a depth of approximately 1,500 feet.[5] At no time did the pressure exerted on the tubing exceed the pressure it was designed to withstand by the manufacturer.[6] Until the moment that the tubing broke, it had withheld the well pressure.[7] Suit was brought by Bradco and purchaser of the tubing against the manufacturer-vendor to recover damages for the loss of the well. Jurisdiction in the trial court was based on diversity of citizenship and an amount in controversy in excess of $10,000.00. Although the trial court found that the loss of the well was caused by a breaking or parting of the Youngstown tubing[8] that Bradco, in assuming that Youngstown was negligent and/or that the tubing was defective, failed to prove that a defect in the tubing or negligence of Youngstown was the proximate cause of Bradco's loss.[9]

The trial court found that the ends of the pipe exceeded the maximum yield strength standards set out by the oilfield

2. Finding of fact No. 8
3. Finding of fact No. 10
4. Finding of fact No. 15
5. Finding of fact No. 14
6. Finding of fact No. 9
7. Finding of fact No. 12
8. Finding of fact No. 14
9. Finding of fact No. 28

industry as well as by the manufacturer.[10] The trial court further found that all tests revealed that the yield strength of the failed piece of tubing exceeded API requirements and that the tubing did not meet the minimum requirements for elongation as set out by that organization.[11]

The trial court further found that all experts agreed that there was a general correlation between yield strength and hardness, i.e., the higher the yield strength, the higher the hardness or the more brittle the tubing would be.[12] Recognizing that the yield strength had exceeded the requirements and the failure was a brittle failure, it was the contention of Bradco that the tubing manufactured by Youngstown was too hard and too brittle and did not meet the API nor Youngstown's own specifications.[13]

Youngstown contended that the tubing became embrittled from H_2S.[14] All testimony at the trial revealed that H_2S was never detected at the well site.[15] It was found that it is the rule in the oil industry in South Louisiana if H_2S cannot be detected by odor no H_2S analysis is made because it is not considered a problem.[16]

The trial court found that although there was no H_2S detected at the well site of the failed well[17] H_2S was found in

10. Finding of fact No. 24
11. Finding of fact No. 24
12. Finding of fact No. 25
13. Finding of fact No. 15
14. Finding of fact No. 16
15. Finding of fact No. 16
16. Finding of fact No. 16
17. Finding of fact No. 16

another well drilled at the surface approximately 400 feet away over a year and a half later tc have H_2S at a level of over four parts per million.[18] Notwithstanding that it was never smelled nor found in the failed well and couid easily be detected by smell at 4.6 parts per million and a minimal perceptible detectable odor reported at .13 parts per million and no odor at .02 parts per million.[19] For emphasis we would like to reiterate that the court found no H_2S in the failed well; that it is a rule of the oilfield industry that if you cannot smell it, you do not concern yourself about it; that the minimum detectable odor is .13 parts per million.

Nevertheless, Youngstown was found to have no duty to warn the user of its product that the tubing was dangerous for us in an H_2S environment,[20] although it was found as a fact that if there was H_2S present, it was in a quantity below which the accepted rule in the oilfield industry does consider a problem.[21]

ARGUMENT

I.

As noted hereinabove, the trial court held that Youngstown's product, the P-105 steel tubing used by Bradco, was not defective. The trial court purportedly based its determination of Louisiana strict products liability law on *Weber v. Fidelity & Casualty Ins. Co. of New York*, 250 So.2d 754 (1971). This is, indeed, the leading case in Louisiana though the precise cause of action as one of strict liability in tort for product defects became finally crystalized in *Perez v.*

18. Finding of fact No. 20
19. Finding of fact No. 17
20. Finding of fact No. 30
21. Finding of fact No. 16

Ford Motor Co., 497 F. 2d 82 (1974), not cited by the lower courts.

Weber held that if a product is proved defective by reason of its *hazard to normal use*, a plaintiff, suing for injuries caused by the defect, need not prove any particular negligence by the maker in its manufacture or processing because the manufacturer is presumed to know the vices in the things he makes whether or not he has actual knowledge of them. The plaintiff must prove injury resulting from a product defect; that is, a product unreasonably dangerous in normal use. To put it another way, a product is unreasonably dangerous if it is dangerous to an extent beyond which would be contemplated by the ordinary consumer who purchased it with the ordinary knowledge common to the community as its characteristics. *Welch v. Outboard Marine Corp.*, 481 F. 2d 252 (5th Cir. App. 1973).

The key relevant facts, as found by the trial court, are as follows:

1) Youngstown P-105 tubing was run into the Bradco well in Lafourche Parish, Louisiana in Southeast Louisiana.[22]

2) The well was completed and shut-in on May 6, 1969 and failed due to a tubing fracture on May 16, 1969.[23]

3) The court found no physical or structural defects in the pipe and found failure as a result of hydrogen sulphide embrittlement.[24]

22. Finding of fact Nos. 3, 4, 5, 6, 7
23. Finding of fact Nos. 8, 9, 10
24. Finding of fact No. 29

4) It is known that if a well contains traces of hydrogen sulphide, P-105 tubing should not be used as it is subject to hydrogen sulphide embrittlement. Embrittlement failure will occur if hydrogen sulphide is at .10 parts per million and is severe above one part per million.

5) The minimum perceptible detectable odor of hydrogen sulphide is at .13 parts per million.

6) It is an accepted rule in the South Louisiana oil industry that, if hydrogen sulphide cannot be detected by odor, no hydrogen sulphide analysis is made because it is not considered a problem.[25]

7) All testimony at trial revealed that hydrogen sulphide was never detected by odor at the well site.[26]

Therefore, though the trial court did not specifically so state, this Youngstown tubing failed as a result of embrittlement in the presence of quantities of hydrogen sulphide below .13, the minimum perceptible odor level. The Youngstown product, therefore, failed in the presence of quantities not considered a problem by the custom and practice in the South Louisiana oil industry. Bradco, therefore, contends that the product was defective in normal use, normal use being that no hydrogen sulphide analysis is made if there is no detectable odor. The absence of any actual physical defect in the product will not prevent the product from being defective by reason of its hazard to normal use.

Certainly, in this case, the Youngstown tubing was dangerous to an extent beyond that which would be contemplated

25. Finding of fact No. 17
26. Finding of fact No. 16

by the ordinary Louisiana oilfield consumer who purchased it with the ordinary knowledge common to that community as to its characteristics. In this case, common knowledge was that if hydrogen sulphide is not detectable by odor, there is going to be no embrittlement problem and no further analysis is required. Further, according to *Perez*, the fact that the pipe failed as a result of hydrogen sulphide embrittlement, the presence of which was beyond the control of Youngstown, is not controlling. The controlling fact, according to *Perez*, is that this pipe was being normally used by Bradco in accordance with the common knowledge and industry practices of the Louisiana oil industry. The fact that the pipe was used in the presence of hydrogen sulphide is not dispositive of the issue of normal use.

Strict products liability in Louisiana rests on *Weber's* hooking together the presumption that a manufacturer knows the defects of his products with the judicial recognition that if Bradco shows, through credible evidence, that the product was used normally and according to instructions and that injury has ensued, Bradco has a *prima facie* case for defect. The burden of proof is met when circumstantial evidence excludes all other reasonable hypotheses. The exact nature of the defect need not be known or proved. *Houston-New Orleans, Inc. v. Paige Engineering Co.*, 353 F.Supp. 890 (Eastern Dist. of La. 1970).

Therefore, in this case, if Bradco proved failure of the pipe under circumstances of normal use, it has established a *prima facie* case. The burden then shifts to the defendant; Youngstown attempted to show abnormal use. Even the trial court found as a matter of fact that normal use or the accepted practice of the oil industry in Louisiana is that, if hydrogen sulphide cannot be smelled, it is not a problem. Once again, note that the Louisiana under *Weber* term "normal use" differs from the "intended use" vocabulary of the common law cases. *Weber, supra*, at Page 87. If tubing

might fail due to hydrogen sulphide embrittlement caused by quantities of hydrogen sulphide not detectable by odor in accordance with common industry knowledge and practices, then the product is defective by virtue of its unreasonable danger to normal use. Nevertheless, the trial court found no product defects, principally because of improper application of Louisiana law.

II.

In addition to its assertion of defectiveness by virtue of failure in normal use, Bradco has also asserted that the product was defective by virtue of a warning deficiency. As the lower courts recognized, the manufacturer has a duty to warn a purchaser of a product that it may have potential perils when used beyond its limitation. *West v. Hydro Test, Inc.*, 196 So. 2d 598; *Thibodeaux v. McWayne Castiron Pipe Co.*, 381 F. 2d 491 (5th Cir. Court of App. 1967).

Certainly, a warning deficiency may make a product unreasonably dangerous in normal use in the same way a physical defect or a design defect might. An unreasonably dangerous condition is a product defect. *Weber, supra* and *Reyes v. Wyeth Laboratories*, 498 F. 2d 1264 (5th Cir. Court of App. 1974).

The warning, with regard to the use of the product, has to be designed for the ordinary consumer or, in this case, for the ordinary consumers of drill pipe in Southern Louisiana. The lower courts accepted, as a finding of fact, that if hydrogen sulphide cannot be detected by odor, it is not considered a problem and no further tests or analyses need be conducted. If no odor is detected, as in this case, a Louisiana oil industry consumer can reasonably conclude that P-105 tubing, if otherwise suitable, as it was in this case, may be

used where hydrogen sulphide is not detectable, since in such cases, the embrittlement of P-105 tubing is not considered a problem. Even the Fifth Circuit Court of Appeals stated, "Of course, we do not suppose that the Bradco people used the smell test actually knowing that it was inadequate". Nevertheless, Bradco was found at fault.

The issue really becomes whether or not a consumer can use a product in accordance with common knowledge in industry practices as Louisiana law indicates in its references to normal use. The Youngstown tubing was so used in this case and yet failed. The reason is that it was defective in normal use and in such cases where a product cannot safely be used in accordance with common knowledge in industry practices, then it is the obligation of the manufacturer to so warn the consumer. In this case, Youngstown should have advised that its P-105 tubing was susceptible to hydrogen sulphide not detectable by its odor. In this connection, it should be noted that it has never been contended and that there is no evidence in the record nor any finding of fact of the trial court that Bradco knew as a matter of common industry practice that P-105 tubing was so susceptible. Instead, all of the evidence was that if you cannot detect hydrogen sulphide in a well by its odor, then there is no problem and no further analysis need be made.

III.

It is clear, in Louisiana as in common law jurisdictions, that contributory negligence, even in its broad sense of reasonable care, is no defense. Nor is it any defense where such negligence consists merely in a failure to discover the defect or to guard against the possibility of its existence. The only defense is where the user discovers the defect and, nevertheless, proceeds unreasonably to use the product.

Hastings v. Distran Products, Inc., 389 F. Supp. 1352 (Western Dist. La. 1975). The *Hastings* court paraphrased the language and comment (N) of the *Restatement of Torts* 402-A and said:

> The form of contributory negligence which consists involuntarily and unreasonably proceeding to encounter a known danger which commonly passes under the name of assumption of risks is a defense, i.e., if the user discovers the defect and nevertheless proceeds unreasonably to make use of the product and is injured thereby, he is barred from recovery.

In the present case, there is no finding of fact, nor has there been any suggestion that Bradco had discovered the limitations of the use of this pipe prior to its use or was aware that the pipe could fail when subjected to hydrogen sulphide levels below those detectable by smell. Clearly, then, whether this sort of defense to a strict products liability suit is called contributory negligence or assumption of the risks, it has not been made out in this case and was not found to be a fact by the court. As the Court of Appeals stated, Bradco did not use the smell test knowing it was inadequate.

The nature of the defense available against a strict products liability claim was recently clarified in *Fields v. Volkswagon of America, Inc., et al.,* Pacific 2d Oklahoma No. 46805, July 27, 1976, where the court held that there is a distinction between abnormal misuse of a product which is a good defense and use of a product for a proper purpose but in a careless manner which is contributory negligence and which is not available as a defense in a strict products liability case. The manufacturer's only defense is unforeseeable abnormal use of the product. See *Noel, Defective Products:* Abnormal Use, Contributory Negligence and Assumption of Risks, 25 *Vanderbilt Law Review*, 93,1972.

It is just as emphatically settled that the plaintiff's use for a proper purpose but in a careless manner (contributory negligence) is no defense at all to a strict products liability suit. *Ford Motor Co. v. Matthews*, 291 So. 2d 169 (Miss. 1974), 45 Miss. Law Review 1287 (1974).

Both the trial court and the Court of Appeals have suggested that Bradco not only specified the pipe, but also controlled the entire operation and that the loss resulted from the improper selection of materials coupled with the failure to conduct a specific test for hydrogen sulphide beyond the odor test or the standard industry test. Both of these deficiencies, it was held, are directly attributal to Bradco and not Youngstown's failure to warn. The Court of Appeals specifically stated that it was in no way suggesting that contributory negligence was a good defense to a products liability case and cited *Hastings v. Distran, supra.* The court stated "We merely hold that under the unique facts of this case, the manufactured product possessed no inherent defect and the defendant was not required to give Bradco any information in addition to that generally known in the industry to protect against use under adverse well conditions of which Bradco was aware or at least should have been aware.

Bradco here respectfully suggests that what Bradco should have been aware of is no defense to a strict products liability action. At worst, its use as in this case, might be characterized as a careless misuse but certainly not as an abnormal misuse and the defense, therefore, fails. The only available defense is knowledge by Bradco of the defect and nevertheless proceeding unreasonably to use of product, *Hastings, supra.*

For the lower courts to hold otherwise is to pay lip service to *Hastings* but to, nevertheless, in effect hold that contributory negligence in its generally understood sense is in fact a defense and is contrary to the law of the State of Louisiana.

Bradco submits that the effect of the holding of the lower court and the Court of Appeals in this case, when considered in light of the applicable Louisiana jurisprudence and the findings of fact made by the trial court, is that a consumer may not use a product in accordance with his common knowledge and in accordance with common industry practices. We submit that such a holding flies in the face of every single strict products liablility case decided in Louisiana and, perhaps, in the nation. The very essence of products liability is the failure of products in normal use. If Bradco, as a consumer, is not allowed to rely on its common knowledge as a consumer of drill pipe and on the industry practices used by it and others everyday, then it, as a consumer, has no protection whatsoever from defectively manufactured products. The very purpose of products liability is to protect the consumer as long as he uses products in a normal fashion and in accordance with common knowledge and does not use a product knowing it is defective.

V.

Bradco further suggests that an additional effect of the holding of the lower courts is that a consumer, instead of being allowed to conduct himself in accordance with accepted industry practices and common knowledge, is, instead, required to go further and conduct testing procedures not called for by industry practices and relative to dangers he would not normally expect. Such a holding is likewise clearly contrary to the avowed purpose of products liability jurisprudence. A consumer is not charged to take precautions

relative to dangers he would not normally expect. *Loyocano v. Continental Ins. Co.*, 283 So. 2d 302 (La. App. 4th Cir. 1973).

VI.

It is further suggested that the courts below erred in recognizing classes of consumers to whom different standards to be applied in terms of strict products liability. It was stated that in spite of the liberal strict products liability laws of Louisiana, that "Louisiana does not hold a manufacturer as compelled to warn sophisticated purchasers of dangers of which the buyer either knows or should be aware". While Bradco itself has cited these same cases as those which originally gave rise to the Louisiana duty to warn theory, it is earnestly asserted that a careful reading of those cases will demonstrate that they are not strict products liability cases and, instead, involve only ordinary negligence. Therefore, in those cases, it was quite proper for the court to state that there is no duty to warn a sophisticated purchaser of dangers of which he knows or should be aware. In strict products liability, however, the only issue available as a defense is actual knowledge of the user of the defect. What he should know or is capable of knowing is totally irrelevant. The Court of Appeals' citation of these authorities demonstrates its insensitivity to the distinction between negligence products liability cases and strict products liability cases.

A review of the Louisiana strict products liability cases, *Weber*, *Perez* and others, clearly shows that there is no authority in Louisiana in a strict liability case for distinguishing between different classes of consumers. The only issue is what is the common knowledge of the common consumer. We concede that in this case, we would be talking about the common knowledge of common consumers of oilfield tubing but this decision requires a "sophisticated" consumer to go

beyond normal accepted industry practices without defining what a sophisticated consumer is.

VII.

Finally, we would suggest that the court's application of *Thibodeaux v. McWayne* and *West v. Hydrotest* is clear error. As pointed out hereinabove, both of these cases, holding that there is no duty to warn a sophisticated buyer of dangers of which the buyer either knows or should know, were decided before strict liability in tort became jurisprudential law in Louisiana with the advent of the *Weber* decision. Both of those cases were simple negligence cases and, while the standards stated therein do suggest available defenses of contributory negligence in those negligence situations, they should not be confused with available defenses to a strict liability claim. What the purchaser of a product *should* know is a matter of contributory negligence as indicated by numerous cases cited above is no defense to a strict liability suit.

In reviewing the opinion of the lower courts and the Court of Appeals, it is apparent that both distinguished bodies made a negligence analysis of the facts and not the proper strict liability inquiry. The trial court, for example, found as a matter of fact that the tubing failed as a result of hydrogen sulphide embrittlement and not as a result of any physical defect in the pipe. The trial court seems to assume that this means there is no defect in the product. We earnestly submit, as we have submitted to the two lower courts, that there is no need to establish a physical defect in order to make a strict products liability case. The question is whether or not a product is unreasonably dangerous in normal use and whether or not there is a warning deficienty both of which

may constiture actual product defect even in the absence of a strict physical or structural defect.

RESPECTFULLY SUBMITTED:

Joseph L. Waitz
WAITZ & DOWNER
Post Office Box 7015
Houma, Louisiana 70360

Attorneys for Petitioner

CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of December, 1976, I mailed a copy of Petitioner's Writ Certiorari to Respondents' attorney of record by placing said copies in a postpaid envelope addressed to:

Mr. John V. Baus
JONES, WALKER, WAECHTER,
POITEVENT, CARRERE & DENEGRE
28th Floor - 225 Baronne Street
New Orleans, Louisiana 70112

Mr. John F. Pugh
Mr. John L. Lanier
PUGH, LANIER & PUGH
504 St. Louis Street
Thibodaux, Louisiana 70301

and deposited said envelope and its contents in the United States mail at Houma, Louisiana.

JOSEPH L. WAITZ
Attorney for Petitioner

APPENDIX A-1

FINDINGS OF FACT AND CONCLUSIONS OF LAW

FILED: December 27, 1974

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA

BRADCO OIL & GAS CO.	CIVIL ACTION
VERSUS	NO. 70-135
YOUNGSTOWN SHEET AND TUBE CO., et al.	SECTION "F"

This is a products liability suit arising out of the alleged failure of certain tubing used in a gas well which was drilled by plaintiff. Plaintiff brought this action against the manufacturer-vendor[1] to recover damages for the loss of the well contending the tubing was defective. Defendants denied liability, contending that the tubing fractured because of hydrogen sulfide embrittlement, the negligence of third parties for whom it is not liable or, in the alternative, pleads the contributory negligence of plaintiff.

This matter was tried to the Court, sitting without a jury, on a former date. After considering the evidence, the arguments and briefs of counsel, the Court makes the following findings of fact and conclusions of law.

---

1. Although this suit was additionally brought against Hydril Company which machined the threads of the pipe involved in this suit, that portion of the claim was settled before this matter was tried. Exhibit D-8.

FINDINGS OF FACT

1.

Plaintiff, Bradco Oil & Gas Co.,[2] is a Texas corporation with its principal place of business in Houston, Texas. It is primarily engaged in the oil and gas business, drilling wells in search of oil, gas and other minerals for the production of same. Plaintiff as the operator and partial owner of the oil, gas and mineral leases upon which the wells in question were drilled, brings this action for itself and on behalf of the co-owners of the leases.[3]

2.

Defendants Youngstown Sheet and Tube Co.[4] and its sales division, Continental EMSCO Co., [5] are Ohio corporations whose principal places of business are in Youngstown,

2. Hereinafter referred to as Bradco.

3. The nominate party plaintiffs who have joined in this action are: Patrick W. Brady, Ray Carlton Muirhead, W.H. Skipwith, Jr., Dominion Corporation, Shasta Minerals, Inc., Bradco Properties, Inc., Stewart Minerals, Ltd., Dominion Investment Corporation, Foyt Minerals, Inc., Jake L. Hamon, Waymon G. Teavy, McDonald Oil Corporation, J.S. Koenig, A.J. Foyt, Jr., Thomas R. Recklin III, Richard N. Lane, Frank W. McBee, Jr., L.E. Scherck, Leonard H. Childs, Ray T. Fortenbach, Robert I. Beck, Dewuze Guyton, Jr., J.T. Trotter, Shasta Investment Co., H.Clay Fouts, The Sandstone Corporation; All Citizens of Texas; Weir Stewart, Jr., James C. Collias, Citizens of Connecticut; Martha C. Douglas, a citizen of Illinois; Peter Henderson Oil Company, Joseph R. Weir, Citizens of New York; Motco, Inc., Joseph A. Maun, H.M. Adrian, Gerald Cafesjian, D.L. McCain, All citizens of Minnesota; R.T. Aldworth, a citizen of California and William P. McClure, a citizen of Washington, D.C. and Thelma Broaddus Allan, H.R.M. Inc., Richard B. Mayor, All citizens of Texas.

4. Hereinafter referred to as Youngstown.

5. Hereinafter referred to as Continental.

Ohio. Defendants are engaged in the business of manufacturing and selling casing, tubing and other pipe and supplies used in connection with the drilling and completion of oil and gas wells.

3.

In 1968, Bradco began operations to drill a wildcat well, known as Libby and Blouin No. 1, in Southwest Lake Boueff Field, Lafourche Parish, Louisiana. At that time in that area, there was no known prior production at the depth at which the well was to be drilled.[6]

4.

Because of the depth of the well and the pressures which would be exerted, high strength tubing was required. The stronger the tubing, the more susceptible it is to hydrogen sulfide embrittlement.

Ernest B. Rubsamen testified that he initially recommended that N80 production tubing be used to complete the well. While N80 is of softer steel and not as susceptible to hydrogen sulfide embrittlement as the tubing actually used, it was, in Rubsamen's opinion, strong enough to withstand the pressures of the well.

5.

Although Continental-EMSCO had N80 tubing in stock and available, Howard Calloway, Bradco's Chief Engineer in

6. Testimony of Ernest B. Rubsamen, President of Ernest B. Rubsman and Associates, employed by Bradco as consulting engineers on the well providing petroleum and drilling engineering services on the well; Byron Jackson Gierhart, petroleum engineer employed by Rubsamen.

the field and in charge of pipe purchases for the well, ordered from Continental 2 7/8", 7.9 pounds/ft. P-105 tubing with a Hydril PH-6 thread.[7]

6.

According to Calloway's order, the P-105 tubing was manufactured by Youngstown, the ends of the tubing were upset by Youngstown according to Hydril specifications[8] and shipped to Hydril for machining of the threaded connections. The tubing was shipped to the well site on January 6,1969.[9]

7.

As the tubing was being run into the well, it was successfully tested by Bradco personnel.

Although the standard test, hydrostatically, on P-105 would be up to 10,000 p.s.i.,[10] it was hydrostatically tested at 15,000 p.si., as well as tested with nitrogen gas while under tension.[11]

8.

The well was completed in January 1969 to the Richfield

7. Exhibits D-7 and D-7a; Testimony of Richard Cavner, petroleum engineer employed by Continental-EMSCO as a regular tubular engineer; and Howard Calloway, petroleum engineer employed by Bradco.

8. Exhibits D-44b and D-44e.

9. Exhibit D-5.

10. Testimony of John Casner, Mechanical Engineer, Manager Tubular Field Engineering, Youngstown.

11. Testimony of Ernest B. Rubsamen, and Harry Voss, petroleum engineer employed by Rubsamen, working at the well site.

Sand. The well was flowed for 3 days, tested, determined to be a producer, and was shut in from January 12, 1969, pending a gas pipeline connection, until May 6, 1969, when testing of the well began.[12]

9.

At no time did the pressure exerted on the P-105 tubing exceed the pressure it could withstand as designed by the manufacturer.

10.

On May 16, 1969, while being flowed for testing, the Youngstown 2 7/8" completion tubing fractured in the 'pin end' (the male threaded connection).[13]

Salvage operations began immediately. Byron J. Gierhart,[14] employed by Ernest Rubsamen and Associates, was placed in charge. He testified that the well was killed to bring it under control by pumping drilling fluids therein. A temperature survey was run, revealing that a break or fracture had occurred in the Youngstown 2 7/8" P-105 tubing at approximately 1500 feet, followed by a break in the 7 5/8" casing at 4500 feet an hour or two later.

12. Exhibits P-2, P-2a, P-5, D-17 and D-17a; Testimony of Byron Jackson Gierhart, James Adams, chemical engineer Assistant Director of Research, P.V.T., Inc., a reservoir fluid lab; and Wayne G. Zeringue, consulting petroleum engineer, accepted by the Court as an expert.

13. Exhibits P-3 and P-4.

14. Accepted by the Court as an expert in petroleum engineering.

11.

On May 26, 1969, 1523 feet of P-105 tubing was recovered. Gierhart testified that the only break found was in the pin end of the threaded connection at about 1500 feet. Another 3500 feet of tubing was recovered, but it was subsequently determined that the well could not be salvaged, thus it was plugged and abandoned on July 18, 1969.[15]

12.

The well was completed to a depth of 15,560 feet, the bottom hole pressure was 13,573 p.s.i., while pressure at the well head was 9600 p.s.i.

Between completion of the well in early January of 1969 and failure of the Youngstown pipe on May 16, 1969, it is without dispute that the pipe held the well pressure.

13.

Examination of the P-105 tubing removed from the well disclosed that the only breaks or cracks were in the pin end (or male threaded connection) and all fractures or cracks were in the first engaged thread below the shoulder of the Hydril thread. These were cut off and sent to Shilstone Testing Laboratory, Houston, Texas, for examination.

In early July, 1969 the remaining 5,000 feet of tubing was

15. Exhibits P-3, P-4 and D-1.

shipped via Patterson Truck Lines to Atlas Truck yard, Houston, where it was stored on a pipe rack in Atlas' yard.

14.

We find that the loss of the well was caused by a breaking or parting of the Youngstown pipe in the Hydril thread at approximately 1500 feet.

15.

Bradco contends that the P-105 tubing manufactured by Youngstown was too hard and too brittle, did not meet API[17] or Youngstown specifications and thus was defective. Conversely, Youngstown contends that Bradco's loss resulted from embrittlement of the pipe by hydrogen sulfide. Hydrogen embrittlement is a weakening of the steel resulting from diffusion of the hydrogen into the crystal structure of the steel.

16.

No tests were conducted to determine if hydrogen sulfide was present in the well. However, all testimony adduced at trial reveals that hydrogen sulfide was never detected by odor at the well site.[18]

16. Testimony of Byron Gierhart, Howard Calloway and Truman C. Bartlett, Assistant Terminal Manager, Atlas Truck Line.

17. American Petroleum Institute, a trade organization which sets out specifications and standards for oil well tubing and line pipe.

18. Exhibits D-17 and D-17a; Testimony of James Ledlow, Weatherly Engineering, Inc. (formerly Louisiana Well Testing) expert petroleum engineer; of James E. Adams, expert in chemistry, Howard Calloway, and Harry Voss.

Both Adams and Ledlow testified that it is an accepted rule in the South Louisiana oil industry that if hydrogen sulfide cannot be detected by odor, no hydrogen sulfide analysis is made because it is not considered a problem. However, testimony adduced at trial reflects that problems involving hydrogen sulfide in regard to deep wells are becoming more evident and API recommends that all new areas should be tested.[19]

17.

Individuals vary in their sense of smell. Hydrogen sulfide can be easily detected by smell at 4.6 parts per million.[20] The minimal perceptible detectable odor reported is at .13 parts per million and no odor at .02 ppm.[21]

18.

Two types of corrosion are found in South Louisiana: (1) sour condensate wells, where hydrogen sulfide can be detected by odor and (2) sweet well corrosion, where it cannot be detected by odor but contains minute quantities of hydrogen sulfide.[22]

19.

A replacement well, designated Libby and Blouin Well

19. Testimony of Wayne Zeringue.

20. Testimony of James Adams, accepted by the Court as an expert in the field of chemistry; and James Ledlow, accepted by the Court as an expert in the field of petroleum engineering.

21. Exhibit P-17; Testimony of Paul Daniel Thomas, metallurgical consultant, accepted as an expert in the field of metallurgy and in the field of corrosion.

22. Testimony of Paul Daniel Thomas. See Exhibits D-14 and 15.

No. 2, was drilled approximately 400 feet from the surface location of the lost well. N80 completion tubing was used. When the well did not produce, the well was sidetracked and drilled directionally toward the lost well.[23] We find from the credible weight of the evidence that Wells No. 1 and No. 2 were drilled to, and completed in, the same sand and same reservoir.[24]

20.

Libby and Blouin Well No. 2 was tested for hydrogen sulfide and found to have a level of over 4 parts per million.[25]

We find that, since the lost well and the replacement well were drilled to the same sand and the same reservoir, if hydrogen sulfide was present in the replacement well, it also was present in the lost well.[26]

21.

P-105 tubing is a high strength, high hardness tubing. It is a well known fact in the industry that if a well contains traces of hydrogen sulfide, P-105 tubing should not be used, for all ranges of P-105 tubing is subject to hydrogen sulfide

23. Exhibit P-14 and D-21; Testimony of Howard Calloway and Byron J. Gierhart.

24. Testimony of Richard C. Colomes, consulting petroleum geologist, accepted as an expert petroleum geologist; Exhibits D-19 and D-20; Testimony of Howard Calloway.

25. Exhibits D-23a; D-23b and D-23c; P-16.

26. Testimony of Richard C. Colomes; James Ledlow, and Wayne G. Zeringue.

embrittlement.[27] Steel becomes susceptible to hydrogen embrittlement beginning at a Rockwell "C" hardness of 20 and becomes very marked at 25.[28]

22.

In a high hardness steel, such as P-105, an embrittlement failure will occur if the hydrogen sulfide is at .10 part per million and embrittlement becomes severe if it is above 1 part per million.[29]

23.

Although P-105 tubing, as manufactured by Youngstown, is an API[30] product, the tubing in question did not carry the API trademark because Bradco specified the pipe ends were to be upset according to Hydril rather than API specifications to accomodate the Hydril threading.

24.

According to API specifications, P-105 tubing has a yield strength (resistence to pull) of 105,000 p.s.i. minimum to a maximum of 135,000 p.s.i.

From the metallurgical tests conducted on the body of the tubing, as determined by the use of an electronic testing device known as an extensometer, rather than as determined by

---

27. Testimony of Howard Calloway and Richard Cavner and Donald Sprow.

28. Testimony of Paul Daniel Thomas.

29. Testimony of Paul Daniel Thomas.

30. Ehibit D-18.

the use of a testing devide known as a divider[31] which is more susceptible to human error, we find that the yield strength was within the limits set out by API.[32] All tests revealed that the yield strength of the failed pin ends exceeded API requirements, nor did the pipe meet the minimum requirements for elongation as set out by that organization.[33]

25.

There is no API standard for hardness, but all experts agreed that a general correlation exists between yield strength and hardness, i.e., the higher the yield strength, the higher the hardness.

Generally, P-105 has a Rockwell "C" hardness of 35.[34]

Tests for hardness conducted on the pin end samples revealed values ranging from 39 to 44.

26.

Hydril used the 'cold working' method while machining the threads. Donald Sprow testified that this method would

---

31. Testimony of Donald L. Sprow, Chief Metallurgist, Southwestern Laboratories, expert in the field of metallurgical investigation; and Frank L. Weaver, Expert in the field of chemistry, metallurgy and corrosion.

32. Testimony of Robert C. Anderson, President, Anderson & Assoc., accepted by the Court as an expert metallurgical and corrosion engineer; and Joe W. Lodge, Assoc. Dir. of Research for Youngstown, accepted as an expert metallurgical engineer. Exhibit D-8a.

33. Exhibit D-8a; Testimony of Donald L. Sprow, Robert C. Anderson and Frank L. Weaver.

34. Testimony of Paul Daniel Thomas, accepted by the Court as an expert in the specifications and requirements of API.

affect the physical properties of the steel by tending to harden and increase the strength of the area being cold worked.

27.

From the weight of the credible evidence adduced at trial, we find that the pipe in question met the minimum tensile strength limits, the chemical limits and the thinness limits set out by API.[35]

28.

Notwithstanding the fact that the pin ends exceeded the maximum yield strength standards set out by the industry and the manufacturer, we find that plaintiff has failed to prove by a preponderance of the evidence that when the tubing left the hands of the manufacturer it was defective in that it was unreasonably dangerous for normal use.

29.

A preponderance of the evidence adduced at trial shows that the characteristics of the breaks which occurred were indicative of hydrogen sulfide corrosion rather than fatigue, collapse or burst breaks from internal pressure.

From the credible weight of the expert testimony adduced at trial, as well as from results of tests conducted on the fractured pin ends, we find that the tubing fractured and the well was lost more likely as a result of hydrogen sulfide embrittlement rather than any negligence of defendants and/or any defects in the tubing caused by the manufacturing process.[36]

35. Exhibits D-2, D-8a and D-9; Testimony of Donald L. Sprow, Robert C. Anderson, Joe W. Lodge and John Casner.

30.

Under the facts of this case, we find that defendants had no duty to warn Bradco that P-105 tubing was dangerous for use in a hydrogen sulfide environment. There is nothing in the evidence to indicate that defendant had any knowledge or could reasonably anticipate that Bradco would use high strength P-105 tubing in a hydrogen sulfide environment.

Bradco, through its employees and/or agents, designed and supervised the drilling of Libby and Blouin No. 1 well. It was their duty to select suitable materials for the well and to acquaint themselves with all scientific information regarding the work, such as the corrosion potential of the tubing and the entire chemical composition of the soil. The means of knowledge are equivalent to knowledge, under the law. Thus, Bradco is charged with knowledge that hydrogen sulfide in minute quantities can be destructive to P-105 tubing; that at least minute quantities of hydrogen sulfide exist in South Louisiana; and that gas composition tests should be made to exclude the presence of hydrogen sulfide before high strength, high grade P-105 tubing is used.

31.

Assuming, arguendo, that defendants were negligent and/or that the tubing was defective, we find that Bradco has failed to prove by a preponderance of the evidence that any defect in the tubing or any negligence on defendants' behalf was a proximate cause of plaintiff's loss.

36. Exhibits D-8a; D-9 and D-10; Testimony of Wayne G. Zeringue, Paul Daniel Thomas, Joe W. Lodge and Robert C. Anderson.

On the contrary, from the weight of the credible evidence adduced at trial, we find that Bradco's own negligence (in failing to test the well site for hydrogen sulfide) or its own misuse of the product in a hydrogen sulfide environment or a superseding independent agent (hydrogen sulfide environment) was more likely the cause of plaintiff's loss than any tubing defect or negligence on behalf of defendants.

CONCLUSIONS OF LAW

1.

This Court has jurisdiction and venue is proper.[1]

2.

Under the tort law of Louisiana, a manufacturer is required to exercise reasonable care in the manufacture of its product, and failure to do so may render the manufacturer liable. In addition, the manufacturer of a product which involves a risk of injury to the user, is liable to any person who, without fault on his part, sustains an injury caused by a defect in the manufacture of the article, if the injury might have been reasonably anticipated.[2]

3.

If the product is proven defective by reason of its hazard to normal use, the plaintiff need not prove any particular

1. 28 USC 1332.

2. La. C.C. Arts. 2315 and 2316; *Welch v. Outboard Marine*, 481 F2d 252 (CA5-1973); *Weber v. Fid. & Cas. Ins. Co. of N.Y.*, 250 So2d 754 (1971); *Arnold v. U.S. Rubber Co.*, 203 So2d 764 (CA3-1967) cert. den. 206 So2d 91 (1968); *Meche v. Farmers Drier & Storage Co.*, 193 So2d 807 (La. App. 3-1967).

negligence by the maker in its manufacture for a manufacturer is presumed to know of the vices in the things he makes, whether or not he has actual knowledge of them. However, plaintiff has the burden of proving the product was defective and that the defect was a proximate cause of plaintiff's loss.[3]

4.

A product is defective if it is 'unreasonably dangerous' to normal use. An 'unreasonably dangerous' condition is one that is dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it with the ordinary knowledge common to the industry as to its characteristics.[4]

5.

Although a manufacturer is required to give adequate warning of known harmful propensities of a product if the product will endanger property when applied to its intended use, a manufacturer has no duty to so warn users when the injured party knows or should have known of limitations and restricted capabilities of the product.[5]

3. *Weber v. Fid. & Cas. Co. N.Y., supra.*

4. *Welch v. Outboard Marine Corp., supra.*

5. *Thibodeaux v. McWane Cast Iron Pipe Co.*, 381 F2d 491 (CA5-1967); *Sawyer v. Pine Oil Sales Co.*, 155 F2d 855 (CA5-1946); *West v. Hydro-Test, Inc.*, 196 So2d 598 (La. App. 1-1967); *Singleton v. Olin Mathieson Chem. Corp.*, 131 So2d 329 (La. App. 3-1961).

6.

A manufacturer of a product is not strictly liable for injuries sustained where there is no proof of a defect in the product.[6]

7.

A manufacturer is entitled to expect a normal use of his product.[7]

8.

Assuming, arguendo, that the product was defective and all other conditions calling for 'liability without fault' are present, or that defendant was negligent in the manufacture of its product, recovery is not justified where defendant's negligence or the defective condition is not a proximate cause of the accident, nor where the injury results from plaintiff's misuse of the product, i.e., use of the product in a manner and for a purpose not reasonably anticipated by the manufacturer, or where the loss is caused solely by a superseding, intervening agent.[8]

---

6. *Evans v. The Travelers Ins. Co.*, 212 So2d 506 (La. App. 1-(1968); *Liberty Mutual Fire Ins. Co. v. Tidewater Oil Co.*, 292 FS 818 (WD La. 1967) aff'd. 403 F2d 1023 (CA5-1968).

7. *Helene Curtis Industries, Inc. v. Pruitt*, 385 F2d 841 (CA5-1967); *Greeno v. Clark Equipment Co.*, 237 FS 427 (DC Inc. 1965); *Maiorino v. Weco Products Co.*, 214 A2d 18 (N.J. 1965); 14 ALR 3d p. 511 *et seq.*

8. *Leathem v. Moore*, 265 So2d 270 (La. App. 1-1972); *Pouncy v. Temple Royal Indem. Co.*, 41 So2d 139 (La. App. 2-1949); *Clark v. Sears Roebuck & Co.*, 254 So2d 62 (La. App. 3-1971); *Simon v. Ford Motor Co.*, 282 So2d 126 at p. 133 (1973); *Wishem v. Ford Motor Co.*, 256 So2d 298 (La. App. 1-1971); *Bianchini v. Humble Pipe Line Co.*, 480 F2d 251 (Ca5-1973); *Arnold v. U.S. Rubber, supra.; Thibodeaux v. McWane, supra.*

9.

Let judgment be entered in favor of defendants, Youngstown Sheet and Tube Co. and Continental - EMSCO Co. and against plaintiff, Bradco Oil & Gas Co., dismissing plaintiff's suit at its costs.

New Orleans, Louisiana, this 27th day of December, 1974.

s/ Lansing L. Mitchell
UNITED STATES DISTRICT
JUDGE

APPENDIX B

B-1

JUDGMENT

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA

Filed: December 30, 1974

BRADCO OIL & GAS COMPANY	CIVIL ACTION
VERSUS	NO. 70-135
YOUNGSTOWN SHEET & TUBE COMPANY AND HYDRIL COMPANY	SECTION "F"

JUDGMENT

Considering the written reasons on file herein, and the direction of the Court as to the entry of judgment;

IT IS ORDERED, ADJUDGED AND DECREED that there be judgment in favor of defendants, Youngstown Sheet and Tube Company and Continental-EMSCO Company and against plaintiff, Bradco Oil and Gas Company, dismissing said plaintiff's suit at its costs.

New Orleans, Louisiana this 30th day of December, 1974.

s/ Lansing L. Mitchell
UNITED STATES DISTRICT
JUDGE

APPENDIX C

C-1

ORDER DENYING MOTION OF PLAINTIFF FOR NEW TRIAL

BRADCO OIL & GAS CO.
versus
YOUNGSTOWN SHEET & TUBE CO. and
HYDRIL COMPANY

For Plaintiff:
Fred A. Collins
323 Shell Bldg.
Houston, Texas 77002

Skipwith & Muirhead
Bank of The Southwest Bldg.
Houston, Texas 77002
Ray Carlton Muirhead

O'Neal, Waitz
Houma, La.
Joseph L. Waitz, TA

For Defendant:
JONES, WALKER, WAECHTER,POITEVENT,CARRERE & DENEGRE
John V. Baus
28th Floor, 225 Baronne St. City
For: Youngstown Sheet & Tube Co.

PUGH, LANIER & PUGH
John I. Lanier, Esq., TA
504 St. Louis Street
Thibodaux, Louisiana 70301
For: Youngstown Sheet & Tube Co.

Wednesday, February 5, 1975

10:00 A.M.

Motion of the plaintiff for a new trial

ARGUED. MOTION DENIED

BRADCO OIL & GAS COMPANY,
Plaintiff-Appellant,

v.

YOUNGSTOWN SHEET AND TUBE CO., and Hydril Co., et al.,
Defendants-Appellants.

No. 75–1483.

United States Court of Appeals,
Fifth Circuit.

June 1, 1976.

A products liability case arose when tubing supplied by the defendant manufacturer fractured in an oil and gas well of the plaintiff producer. Findings and judgment of the United States District Court for the Eastern District of Louisiana at New Orleans, Lansing L. Mitchell, J., were adverse to the producer, and the producer appealed. The Court of Appeals, Clark, Circuit Judge, held that, under evidence, the District Court could reasonably conclude that the experienced producer was chargeable with knowledge that even trace quantities of hydrogen sulfide could create a hazard, and where the producer not only specified the pipe but alsc controlled the entire operation and loss resulted from improper selection of materials coupled with failure to conduct a specific test for hydrogen sulfide, both deficiencies were attributable to the producer, and not to failure of the manufacturer to warn.

Affirmed.

1. Products Liability ⇐82

In products liability case, trial court permissibly weighted expert testimony. Fed.Rules Civ.Proc. rule 52(a), 28 U.S. C.A.

2. Products Liability ⇐83

In action for loss of oil and gas well due to fracturing of tubing supplied by defendant, conflicting scientific evidence and permissibly weighted expert testimony sustained trial court's findings including finding that well was likely lost as result of hydrogen sulfide embrittlement rather than any negligence of defendant and/or defects in the tubing caused by manufacturing process. Fed.Rules Civ. Proc. rule 52(a), 28 U.S.C.A.

3. Products Liability ⇐14, 75

Under Louisiana law, manufacturer is generally presumed to know defects of his product and will be liable if his goods prove unreasonably dangerous for normal use; as corollary, if product cannot be safely used in certain foreseeable ways, manufacturer is under duty to fully warn consumer of particular dangers involved, but manufacturer is not compelled to warn a sophisticated purchaser of dangers of which he either knows or should be aware.

4. Products Liability ⇐83

Under evidence, in products liability case, district court could reasonably conclude that experienced oil and gas producer was chargeable with knowledge that even trace quantities of hydrogen sulfide could create hazard, and where producer not only specified pipe but also controlled entire operation and loss resulted from improper selection of materials produced by defendant, coupled with failure to conduct specific test for hydrogen sulfide which embrittled the tubing, both deficiencies were attributable to plaintiff producer, and not to failure to defendant manufacturer to warn.

5. Products Liability ⇐81

In products liability case in which tubing manufactured by defendant was

Synopses, Syllabi and Key Number Classification
COPYRIGHT © 1976, by WEST PUBLISHING CO
The Synopses, Syllabi and Key Number Classification constitute no part of the opinion of the court.
INDEXED

found to have been corroded by hydrogen sulfide in oil and gas well, trial court properly excluded chemical analysis of sample of fluid kept in plastic bottle in closet in investor's office for four years before it was analyzed, in view of evidence that any tests done on substance four years after collection would be unreliable and particularly where plaintiff producer, by not attempting to introduce such testimony until last day of trial, and by failing to preserve any portion of the sample tested, denied manufacturer any opportunity to conduct its own test.

Appeal from the United States District Court for the Eastern District of Louisiana.

Before DYER, CLARK and GEE, Circuit Judges.

CLARK, Circuit Judge:

This Louisiana products liability case presents only two questions for appellate resolution: whether the trial court's findings of fact were clearly erroneous and whether the proper legal standard was applied. The district court's extensive fact-findings are supported by the record and in granting judgment for the defendant, the court correctly applied the relevant Louisiana tort law principles. We affirm.

Bradco Oil and Gas Company (Bradco) purchased high-strength tubing (P–105) from the manufacturer, Youngstown Sheet and Tube Company (Youngstown), for use in drilling an exploratory or "wildcat" oil and gas well in LaFourche Parish, Louisiana. Bradco personnel selected the type of tubing desired and provided the specifications. The well was completed in January 1969, determined to be a producer and shut in four months pending a pipeline connection. During this period, the tubing held well pressures without difficulty. While being flowed for testing on May 16, 1969, the tubing fractured at a depth of approximately 1,500 feet. Salvage operations were unsuccessful and the well was finally plugged and abandoned on July 18, 1969.

Bradco sued for damages resulting from the loss of the well ($1,500,000), claiming that Youngstown sold it a product that was unreasonably hazardous for normal use. Youngstown's chief defense was that the break occurred as a result of embrittlement of the pipe caused by the presence of hydrogen sulfide at the wellsite. At the bench trial, the court received testimony from several experts on both sides, including metallurgists and petroleum engineers. No pertinent tests for H_2S had been conducted at the wellsite and Bradco employees had never detected the substance by odor. However, defendant made its case for the presence of H_2S by the testimony of experts who had examined the failed piping and had positively tested a replacement well located 400 feet from the original site. From this proof, the court found that H_2S was present, although in quantities not readily detectable by smell. Since the hard P–105 tubing chosen by Bradco was susceptible to H_2S embrittlement, the court concluded that "the well was lost more likely as a result of hydrogen sulfide embrittlement rather than any negligence of defendants and/or defects in the tubing caused by the manufacturing process."

[1, 2] Throughout its appellate brief, Bradco challenges particular factfindings involving the presence *vel non* of H_2S. Without detailing each assignment of error, it suffices to state that the lower court's findings on causation are not

clearly erroneous. Fed.R.Civ.P. 52(a). The court sifted through the sometimes conflicting scientific evidence and permissibly weighted the expert testimony. These findings cannot be disturbed on appeal.

Bradco's chief complaint involves a question of law. Conceding *arguendo* that H_2S was the cause of the loss, plaintiff urges that Youngstown had a duty to warn the purchasers of its product that P–105 tubing could be dangerous when used in wells containing even trace quantities of H_2S. The problem stems from a rule-of-thumb (the so-called "smell test") commonly used in the South Louisiana oil industry. Bradco's experts testified that it was an accepted practice that if H_2S could not be detected by odor, no H_2S analysis was made because it was not considered a problem. Unfortunately, the proof in this case demonstrated that even non-detectable amounts of H_2S can cause embrittlement in high-strength tubing. Since Youngstown provided no direct warning and Bradco, relying on the absence of a distinctive odor, failed to conduct a chemical test for H_2S, the question then becomes whether Youngstown had a duty to provide a double warning, *i. e.*, that P–105 tubing was unsafe for use in an H_2S environment and that the "smell test" was an inadequate means to assure safe use.

[3] Fairly recently, the Louisiana Supreme Court adopted a species of strict liability in product liability cases. *Weber v. Fidelity & Casualty Insurance Co.*, 259 La. 599, 250 So.2d 754 (1971). The general rule is that a manufacturer is presumed to know the defects of his product and will be liable if his goods prove unreasonably dangerous for normal use. *Id.* at 755. As a corollary to this rule, Louisiana courts have stated that if a product cannot be safely used in certain foreseeable ways, then the manufacturer is under a duty to fully warn the consumer of the particular dangers involved. *See Rey v. Cuccia*, 298 So.2d 840 (La.1974); *American Guaranty & Liability Insurance Co. v. Little*, 328 So.2d 706 (La.App. 4th Cir. 1976). Despite this liberal standard, however, Louisiana does not hold a manufacturer is compelled to warn sophisticated purchasers of dangers of which the buyer either knows or should be aware. *See Thibodaux v. McWane Cast Iron Pump Co.*, 381 F.2d 491 (5th Cir. 1967); *West v. Hydro Test, Inc.*, 196 So.2d 598 (La.App. 1st Cir. 1967).

[4] The last stated legal principle controls this case. Bradco personnel admitted that they generally recognized the potential hazard of H_2S embrittlement with the P-105 pipe they themselves specified. Indeed, the problem had been discussed in industry publications and developers had been warned by the American Petroleum Institute to pre-test new areas, such as the one in which this well was drilled, for the potentially corrosive substance. Of course, we do not suppose that the Bradco people used the "smell test" actually knowing that it was inadequate. However, from the testimony adduced, the district court could reasonably conclude that Bradco as an experienced oil and gas producer was chargeable with the knowledge that even trace quantities of H_2S could create a hazard. Bradco not only specified the pipe, but also controlled the entire operation. The loss resulted from an improper selection of materials coupled with the failure to conduct a specific test for H_2S. Both these deficiencies are directly attributable to Bradco, not Youngstown's failure to warn.

In affirming the district court, we in no way suggest that contributory negligence is a defense to a products liability action in Louisiana. *See Hastings v. Dis Tran Products, Inc.*, 389 F.Supp. 1352 (W.D.La.1975). We merely hold that under the unique facts of this case, the manufactured product possessed no inherent defect and the defendant was not required to give Bradco any information in addition to that generally known in the industry to protect against use under adverse well conditions of which Bradco was aware, or at least should have been aware.

Bradco's final challenges to the district court judgment merit little discussion. Its complaint that the court took "judicial notice" of the presence of H_2S at the lost wellsite is misleading. The judicial notice comment made by the judge during the trial merely indicated an agreement with defendant's contention that it was possible for traces of H_2S to exist at the site without showing up on Bradco's gas composition tests which were not designed to detect minute qualities of H_2S. The presence of H_2S at the wellsite was proven by defendant's expert witnesses. There was no necessity to take judicial notice of this crucial fact and the record reveals that the district court never intended and in fact never acted to relieve Youngstown of its burden of proof on this issue.

[5] Likewise, Bradco's contention that the court erred in excluding rebuttal evidence of an analysis of a liquid sample taken from the wellsite provides no reason for upsetting the judgment below. In January 1969, one of Bradco's investors (not a chemist or engineer) dipped a sample of well fluids from a container near the well. He testified he kept this fluid in a plastic bottle in a closet in his office for four years before it was analyzed. Plaintiff's own evidence indicated that any tests done on the substance four years after collection would be unreliable. Additionally, Bradco never attempted to introduce its testimony on this sample until the last day of trial and, by failing to preserve any portion of the sample tested, denied defendant any opportunity to conduct its own test. Under these circumstances, it was clearly within the court's discretion to exclude the chemical analysis of the sample.

AFFIRMED.

A true copy
Test: EDWARD W. WADSWORTH
Clerk, U. S. Court of Appeals, Fifth Circuit
By Susan M. Howard
Deputy
New Orleans, Louisiana OCT 26 1976

Adm. Office, U.S. Courts—West Publishing Company, Saint Paul, Minn.

BEST COPY AVAILABLE

APPENDIX E

E-1

United States Court of Appeals
Fifth Circuit
Office of the Clerk
September 22, 1976

TO ALL COUNSEL OF RECORD

NO. 75-1483 - Bradco Oil & Gas Co. vs. Youngstown Sheet & Tube Co. & Hydril Co., et al.,

Dear Counsel:

This is to advise that an order has this day been entered denying the petition ( ) for rehearing, and no member of the panel nor Judge in regular active service on the Court having requested that the Court be polled on rehearing en banc (Rule 35, Federal Rules of Appellate Procedure; Local Fifth Circuit Rule 12) the petition ( ) for rehearing en banc has also been denied.

See Rule 41, Federal Rules of Appellate Procedure for issuance and stay of the mandate.

Very truly yours,

EDWARD W. WADSWORTH,
Clerk

By s/ Clare F. Sachs
Deputy Clerk

cc: Mr. Joseph L. Waitz
Mr. Fred A. Collins
Mr. Ray Carlton Muirhead
Mr. John Baus
Mr. John Lanier

A true copy
Test: Edward W. Wadsworth
Clerk, U.S. Court of
Appeals, Fifth Circuit
By: s/ Susan M. Gravois
Deputy
New Orleans, La.
Oct. 26, 1976